



Napery Troubleshooting Guide

For Laundries With No Finishing Equipment

PROBLEM	CAUSE	SOLUTION
DISCOLORATION	Bleach on Colors	Do not use bleach on colors.
	Residual Dye Transfer	Prewash colors separately on first wash to prevent residual dye transfer. Sort napery into recommended color groupings for subsequent washings. Always wash whites separately.
	Soil Redeposition	Reclaim napery discolored by soil redeposition by using increased temperature and supplies. Prevent redeposition by adjusting wash formula for soil level. Specific recommendations are available from your Milliken Technical Services Representative or chemical representative.
	Chemical Reaction	Avoid chemical discoloration by thoroughly rinsing all chemicals out of the napery before drying or finishing.
	Yellowed Whites	Chlorine bleach will not damage Milliken table linen fabric, but residual bleach on white napery can cause yellowing if the chlorine is not neutralized before exposure to heat. Avoid yellowing by neutralizing the bleach with an antichlor in the second rinse after bleaching with chlorine.
	No Sour	Use of sour is required for proper activation of the Milliken soil release properties.
	Incorrect Ordering	Order napery colors by the four digit code number or the distributor color codes to avoid confusing similar colors.
WATERPROOFING	Fabric Softeners	Fabric softeners prevent Milliken napery from absorbing liquids. DO NOT use fabric softeners on napery.
	Tallow Soap	Do not use tallow soaps on Milliken napery. Tallow breaks down into alkali and fat in the wash cycle. Instead, use built detergents, surfactants, and solvated surfactants.
	Mildewcides	Use only mildewcides that have no quaternary ammonium base.
	Washing with Cotton or Blends	Wash Milliken napery with other 100% synthetic fabrics. Do not wash with cotton or poly-cotton blends.
	Soil Redeposition	See DISCOLORATION - Soil Redeposition.
	PVAc Build-Up	Reclaim, then reformulate the starch ratio: four parts natural starch to one part PVAc.
STATIC	Overdrying	Reduce cycle time so goods don't tumble in dry condition as long.
	Low Humidity	Low relative humidity can cause drier air and static. A room humidifier may be occasionally needed.
STAINS	PERMANENT: Bleach Spots/Cleaners Carbon/Metal Heat Set Food/Cement	For permanent stains, try reclaiming with more supplies and higher temperatures to reduce stain visibility. Napery with noticeable stains should be ragged or overdyed by a qualified dye house.
	REMOVABLE: Blood	Use a warm water flush, then normal washing. Do not use hot water flush on protein soils.
	Fats/Corn Oil	Use solvated surfactants to boost regular formula.
	Salad Dressing	Use solvated surfactants to boost regular formula. Split flush.
	Motor Oil/Grease	Use a laundry product designed for these emulsifiable stains.
	Lipstick/Candle Wax	Use solvated surfactants and/or higher temperatures.
	Rust	Use an oxalic acid prewash or rust-removing sours.
	Mildew	Use chlorine bleach on whites. As a last resort, use 1% available chlorine bleach at 1-2 quarts/CWT to remove mildew from colored napery. This will cause some color deterioration. A mildewcide with no quaternary ammonium base should be used to minimize mildew growth if mildew is a persistent problem.
	Light Spots	See ABUSE
PICKS AND SNAGS	Rough Shelves & Table Corners	Eliminate rough spots and protruding nails on shelves. Tape table corners and sides on wooden or sharp metal edged tables.
	Personnel	Educate personnel on correct handling techniques.
	Burrs & Sharp Edges	Check for burrs and sharp edges on machinery and handling equipment by using a wet knitted fabric.
	Washing with Tableware	Be sure all tableware and other foreign objects are removed before washing.
ABUSE	Excessive Heat	Excessive heat such as a hot grill will damage linens.
	Incorrect Storage	Set up storage for both clean and soiled dry napery in a convenient place. Check to be sure correct procedures are being followed.
	Soil Segregation	Do not mix soiled napery with bleach rags or bar wipes (light spots).
	Incorrect Usage	Napery should not be used as a grease rag or bar wipe. Use appropriate items for these applications.

This guide is intended as a quick reference for many common laundry situations. For further information, contact your Milliken Technical Services Representative.

1-800-322-TEAM or 864-503-2717



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WRINKLING	Overloading Washer	Load washer at maximum 2/3 rated capacity.
	Overloading Dryer	Load dryer at maximum 1/2 rated capacity.
	Excessive Extraction	1. Limit extract to low speed if possible for 2-3 minutes. 2. If high only - minimum possible time. 3. If low speed built in to stabilize machine (usually 45 to 55 seconds) run low plus minimum high speed.
	Severe Temperature Drops	Limit drops in temperature in both washing and drying to maximum of 15°F per minute. This is especially true at temperatures above 140°F.
	Improper Drying (Linen Still Damp)	Linen cycle necessary for Milliken table linen is: 1. Wet and cold when you put it in the dryer. 2. Wet and hot as it dries. 3. Dry and hot for as short a time as possible. 4. Dry and cool until linens are completely cool (100°F or body temperature).
	Overdrying Linen	Excessive drying time won't wrinkle linen unless cooling temperature drops are severe. Overdrying can create static.
	Improper or No Cool Down	Gradual cool down is necessary for any synthetic linen (See Improper Drying, Severe Temperature Drop).
	Faulty Controls	Equipment must have proper and adequate controls for hot cycle, cool cycle, temperature control and air flow.
	Dryer Capacity	Large size and/or long length cloths won't tumble properly in a small diameter dryer. Have equipment large enough for the fabric.
	No Shelf Life	All linen needs 24 hours of shelf time to help remove "soft" wrinkles.

WRINKLE RECLAIM PROCEDURE

If you have problems with wrinkling, this procedure should enable you to restore the linen to a non-wrinkled condition. After the reclaim, the cause(s) of the wrinkling should be determined to prevent reoccurrence of the problem.

1. Load gas dryer to no more than 50% capacity with dry wrinkled linen.
2. Run on "Hot" setting (190°F-210°F) for 20 to 30 minutes.
3. Run 10 to 15 minutes "cooldown" or until dryer is sufficiently cooled (100°F) -15° decrease per minute.
4. Be sure dryer does not stop during either heat or cool cycles.
5. Remove promptly. Tops should be draped or spread across a cart or folding table as unloaded. Napkins should be unloaded from dryer and stacked flat and as high as handling will permit. Linen should be stacked neatly by size in an adequate storage area.
6. Allow shelf life of 24 hours if possible to remove remaining "soft" wrinkles.

Hard creases and wrinkles should be gone. The high heat and extended time allow the fabric to "relax" back to its flat dry state.

Note: For steam tumblers more time may be necessary due to the limited temperature range of the machine. If the dryer does not get hot enough to do a reclaim, the linens may be taken to a laundromat to run this procedure. Also, a rental laundry or dry cleaners can run the linens through a flatwork ironer (set at 325°F - 340°F) to remove the hard wrinkles.

For additional information and assistance, contact:
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N199-37W-KP10M